

# History of the Wireless E-911 Services Board

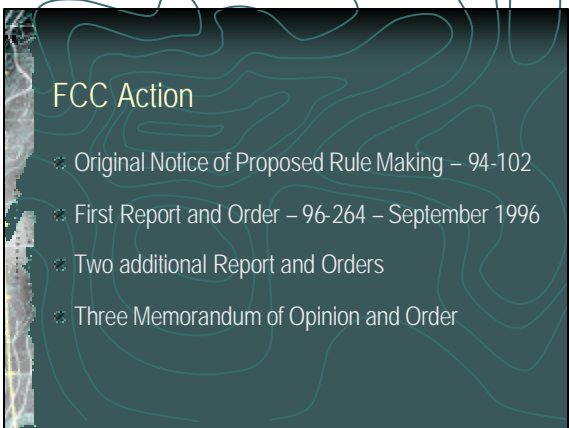
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# Phase I

- ❖ Two methods for data provision:
  - ❖ Call path Associated Signaling (CAS) – The voice call and the call back number data follow the same path.
  - ❖ Non-Call path Associated Signaling (NCAS) – The call back number data follows a different path than the voice call to get to the PSAP.

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## FCC Action

- ❖ Original Notice of Proposed Rule Making – 94-102
- ❖ First Report and Order – 96-264 – September 1996
- ❖ Two additional Report and Orders
- ❖ Three Memorandum of Opinion and Order

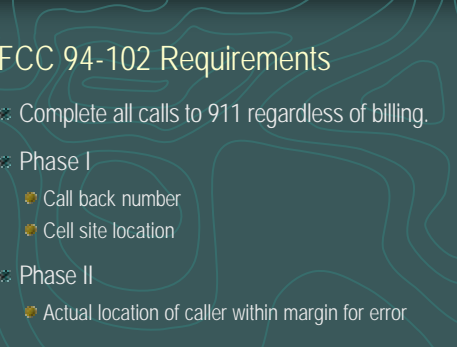
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# Call Path Associated Signaling (CAS)

The diagram illustrates the Call Path Associated Signaling (CAS) architecture. It shows the flow of signaling and data between various network components:

- Radio Access Network:** Includes a **Radio Access** unit and a **Mobile Equipment** (labeled 'M').
- Core Network:** Consists of a **Mobile Equipment** (labeled 'M') and a **Mobile Equipment** (labeled 'M').
- Gateways:**
  - IPsec Gateway:** Connects the Radio Access Network to the Core Network.
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- Signaling and Data Flow:**
  - IPsec Gateway:** Connects the Radio Access Network to the Core Network.
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- Other Components:**
  - IPsec Gateway:** Connects the Core Network to the Core Network.
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Source: SCC



## FCC 94-102 Requirements

- Complete all calls to 911 regardless of billing.
- Phase I
  - Call back number
  - Cell site location
- Phase II
  - Actual location of caller within margin for error

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# Non-Call Path Associated Signaling (NCAS)



## Phase II - Location Technology

- ✦ Handset based solution
  - GPS
- ✦ Network based solution
  - Time Distance of Arrival
  - Angle of Arrival
  - RF Fingerprinting
- ✦ Hybrid solution

## Phase II Timeline

- ✦ Announce Technology by November 9
- ✦ Handset based
  - Begin selling by October 2001 (regardless of request).
  - 25% of new by December 31, 2001.
  - 50% by June 30, 2002 and 100% by December 31, 2002.
  - Full penetration (95%) by December 31, 2005.
- ✦ Network based
  - 50% of area in 6 months and 100% within 18 months.

## FCC Requirements

- ✦ PSAP must make a request to the CMRS provider.
- ✦ PSAP must be able to use the data.
- ✦ A cost recovery mechanism must be in place for the PSAP.
- ✦ Phase I must be provided within 6 months of a request by the PSAP.

## Legislative History

- ✦ 1998 – House Bill 1331 establishes the Wireless Fund and creates the first Board.
- ✦ 1998 – House Joint Resolution 215 directed the Crime Commission to study Enhanced 9-1-1.
- ✦ 1999 – Budget amendment directs 9 jurisdictions to begin taking wireless 9-1-1 calls.
- ✦ 2000 – Senate Bill 148 restructures program.

## Phase II Accuracy Requirement

- ✦ Handset Based Solution
  - 50 meters / 67% of the calls
  - 150 meters / 95% of the calls
- ✦ Network Based Solution
  - 100 meters / 67% of the calls
  - 300 meters / 95% of the calls

## House Bill 1331

- ✦ Established a \$0.75 surcharge on wireless telephone bills.
- ✦ Established Wireless E-911 Services Board as a separate political subdivision.
- ✦ Allowed PSAPs and CMRS Providers to seek "reasonable" and "direct" costs for the provision of wireless E-911 Phase I and II.
- ✦ Required "true-up" process

## Original Wireless E-911 Board

- ✦ Seven members:
  - Two PSAP Representatives
  - One Financial Officer from a Locality
  - Two Wireless Industry Representatives
  - One Local Exchange Carrier Representative
  - The Comptroller of Virginia (Chairman)

## Senate Bill 148

- ✦ Expanded the membership of the Board and changed Chairman.
- ✦ Established deadlines for the provision of statewide wireline E-911 and wireless 911.
- ✦ Gave responsibility for wireline funding to Wireless Board.
- ✦ Established a subcommittee to review CMRS submissions (FOIA exemption).

## Original Wireless E-911 Board

- ✦ Established PSAP Guidelines for FY00/FY01
  - 22 – PSAPs submitted requests in FY00 totaling approximately \$4.4 million.
  - 35 – PSAPs submitted requests in FY01 totaling approximately \$5.6 million.
- ✦ "True-up" for FY00 has not been completed.

## Senate Bill 148 (continued)

- ✦ Created the Division of Public Safety Communications.
  - Staff for the Board
  - Technical assistance to localities
- ✦ Capped the wireline surcharge at \$3.00
- ✦ Requires yearly reporting to General Assembly.
- ✦ \$1.4 million appropriation for wireline.

## Original Wireless E-911 Board

- ✦ Established Guidelines for CMRS submissions
  - Most based on capitation rate (\$0.15 - \$0.304)
  - Non-recurring as well as recurring.
  - Submit certified subscriber count each quarter to Chair of payment.
- ✦ Specific information about the submission was confidential and could not be shared with the Board.

## What's Next

- ✦ FY02 PSAP/CMRS submissions
- ✦ Guidelines for wireline E-911 grant process
- ✦ FY00 "true-up" process
- ✦ Status report to the General Assembly before the session